ELSEVIER

Journal of Materials Processing Technology 123 (2002) 501–502

Journal of Materials Processing Technology

www.elsevier.com/locate/jmatprotec

Author Index of Volume 123

Adiguzel, O., 498
Agarwal, M., 440
Aiming, X., 377
Amino, M., 285
Arana, J.L., 292
Aydogdu, A., 498
Aydogdu, Y., 498

Bao, J., 209
Batzer, S.A., 114
Bhattacharyya, B., 476
Bo, Z., 54
Branis, A.S., 464
Byrne, G., 100, 107

Chan, F.T.S., 85
Chan, K., 5
Chan, K.C., 245
Chang, M.-H., 336
Chattopadhyay, A.B., 483
Chen, C.-K., 219
Cheng, Y.-N., 371
Cheon, J.S., 120
Cheung, Y.L., 245
Choi, H.J., 270
Chou, C.P., 346
Chou, J.-H., 22
Chuanshao, L., 54
Chun, Y., 236
Chunfeng, L., 225
Chung-Chen, T., 1
Coquille, J.C., 490
Corcoran, A., 100

Daoud, A., 313
Date, P.P., 459
Datta, G.L., 303
Deqing, L., 382
Dhar, N.R., 483
Dunjun, C., 377

Elewa, I.M., 133

Feng, J., 54
Feng, W., 236, 241
Flanagan, C., 393
Fontaine, J.F., 490
Fuzhan, R., 361

Gadelmawla, E.S., 133
Galligan, S., 107
Guo, J., 229
Guofu, G., 54

Hamdan, M.M., 406, 422, 432
Hamouda, A.M.S., 406, 422, 432
Hashim, J., 251, 258
Hashmi, M.S.J., 251, 258, 406, 422, 432
He, Y., 42
Hocheng, H., 80
Hong, H., 1
Hooper, B.J., 107
Hsieh, C.-H., 22
Hsu, R.Q., 47
Huimin, X., 241
Hung, N.P., 13
Hussain, P.B., 120
Hwang, B.B., 270
Hwang, Y.-M., 336

Im, Y.T., 120
Im, Y.-T., 399
Inamdar, M.V., 459
Ip, R.W.L., 85
Ivan Maldonado, G., 114

Ji, P., 93
Jia, J., 229
Jiang, B., 85
Jianhui, L., 225
Junhua, Z., 236

Kar, A., 451
Karhausen, K.F., 155
Kim, H.S., 319
Kim, S.Y., 120
Kim, Y.H., 185, 270
Konstanty, J., 146
Koura, M.M., 133
Kumar, S., 440
Kuo, K.L., 80
Kwak, D.Y., 120
Kwan, C.T., 197, 203
Kwon, H.-C., 399

Laishou, L., 236
Lam, Y.C., 385
Lambertin, M., 490
Lamikiz, A., 292
Lau, H.C.W., 85
Lau, K.S., 5
Lee, S., 371
Lee, S.C., 185
Lee, T.C., 75
Lee, Y.D., 185
Li, K.-Y., 219
Li, L., 377
Li, S., 209
Li, X., 209
Li, Y., 451
Lin, S.Y., 36
Liu, X.-L., 385
Lo, S.-W., 212
Looney, L., 251, 258
López de Lacalle, L.N., 292
Lu, Y.-H., 212

Ma, Q., 61
Maksoud, T.M.A., 133
Mamalis, A.G., 464
Manabe, K.-i., 285
Manna, A., 476
Manolakos, D.E., 464
McClain, B., 114
Mei, Z., 42
Miaoquan, L., 377
Motomura, M., 277

Nagesh, D.S., 303

Ohashi, T., 277
Oki, Y., 277
Othman, M.Y., 179

Paul, S., 483

Qing, Z., 382
Quick, N.R., 451

Radin Umar, R.S., 406, 422, 432
Reif, W., 313
Roters, F., 155
Ryan, P., 100
Ryou, T.K., 270

Sabnis, S.V., 459
Saeki, Y., 277
Sahari, J., 179
Sakaki, S., 264
Sánchez, J.A., 292
Seaman, B., 100
Sexton, L., 100
Sheth, A., 167
Shuaeib, F.M., 406, 422, 432
Shuping, H., 361
Sin, K.M., 5
Soliman, H.H., 133
Sopian, K., 179
Sutradhar, G., 440

Tang, C.Y., 75
Teng, B.G., 18

Elsevier Science B.V.
PII: S0924-0136(02)00188-7

Thiruvarudchelvan, S., 71
Thomson, P.F., 385
Toal, D.J.F., 393
Trembath, K., 167
Tsao, C.-C., 354
Tseng, K.H., 346

Utsumi, N., 264

Wan, M., 67
Wang, J.N., 31
Wang, J.P., 323
Wang, X.C., 191
Wang, Y., 209
Wang, Z., 61
Wang, Z.R., 18
Weibo, Q., 241
Weimin, Z., 361
Wu, C.L., 75
Wu, C.W., 47
Wu, S.-J., 336
Wu, X.-D., 67
Wu, Y.-J., 22

Xue, J., 93

Yang, G.M., 490
Yang, S.-C., 219
Yang, Y., 209
Yip, J., 5
Yongzhi, W., 225
Yu, Y., 67, 191
Yuan, S.J., 18
Yuan, W.Q., 31
Yue, W., 236
Yuli, L., 42
Yuying, Y., 225

Zengxiang, F., 42
Zhang, J., 329
Zhang, J.H., 75
Zhiheng, Z., 225
Zhihua, L., 382
Zhong, Y., 61
Zhong, Z., 13
Zhou, X.-B., 67
Zhu, H., 229
Zhu, Y.H., 245
Zulkifli, R., 179

ELSEVIER

Journal of Materials Processing Technology 123 (2002) 503–509

Journal of Materials Processing Technology

www.elsevier.com/locate/jmatprotec

Subject Index of Volume 123

A356 aluminum
Influence of Al_2O_3 particulate on the aging response of A356 Al-based composites, 313
Activation energy
Analysis of creep deformation behaviors of type 2205 duplex stainless steel under continuous annealing conditions, 185
Age hardening
Influence of Al_2O_3 particulate on the aging response of A356 Al-based composites, 313
Air bending
On the effects of geometric parameters on springback in sheets of five materials subjected to air vee bending, 459
Al/SiC-MMC
A study on different tooling systems during machining of Al/SiC-MMC, 476
Al_2O_3 particulate
Influence of Al_2O_3 particulate on the aging response of A356 Al-based composites, 313
Aluminium alloys
Development and application of constitutive equations for the multiple-stand hot rolling of Al-alloys, 155
Aluminum casting alloy
Experimental study and theoretical analysis on die soldering in aluminum die casting, 229
6061 Aluminum-alloy wheel
An analysis of the forging processes for 6061 aluminum-alloy wheels, 270
Anisotropy
Anisotropy of the phase-transformation plasticity in textured CuZnAl shape-memory sheets, 31
Annealing conditions
Analysis of creep deformation behaviors of type 2205 duplex stainless steel under continuous annealing conditions, 185
Arificial neural networks
Prediction of weld bead geometry and penetration in shielded metal-arc welding using artificial neural networks, 303
Asperity behaviour
Contact pressure between two rough surfaces of a cylindrical fit, 490

Balance method
Determination of Young's modulus of electroplated nickel–iron (Ni/Fe) and micro-machined Si thin films by the balance method, 329
Bar rolling
Particle distribution in cast metal matrix composites—Part II, 258
Interactive computer-aided-design system for roll pass and profile design in bar rolling, 399
Basic material model
Computer-aided blanking sequence design of extruded aluminum materials, 277
Bead geometry
Prediction of weld bead geometry and penetration in shielded metal-arc welding using artificial neural networks, 303
Biaxial tensile specimen
Design of a cruciform biaxial tensile specimen for limit strain analysis by FEM, 67
Blade with a tenon
A study of the influence of the friction conditions on the forging process of a blade with a tenon, 42

CAD
Particle distribution in cast metal matrix composites—Part II, 258
Computer-aided blanking sequence design of extruded aluminum materials, 277
Interactive computer-aided-design system for roll pass and profile design in bar rolling, 399
CAPP
Computer-aided blanking sequence design of extruded aluminum materials, 277
Casting
Progress in the micro-modeling of the casting solidification process, 361
Chemical mechanical polishing
Pad conditioning in chemical mechanical polishing, 107
Chemistry
Experimental study and theoretical analysis on die soldering in aluminum die casting, 229
Closed-die forging
An analysis of the closed-die forging of a general non-axisymmetric shape by the upper-bound elemental technique, 197
A concave circular parallelepiped element and its application to three-dimensional closed-die forging, 203
Cold forging
Simulation of clutch-hub forging process using CAMP*form*, 120
Complex strain path
Design of a cruciform biaxial tensile specimen for limit strain analysis by FEM, 67
Composite
Influence of Al_2O_3 particulate on the aging response of A356 Al-based composites, 313
Composite clad rods
Extrusion of three-layer composite hexagonal clad rods, 47
Composite materials
Motorcycle helmet. Part III: Manufacturing issues, 432
Compression
Deformation of solid powder discs and strips under lubricated condition, 440
Computer vision
Roughness parameters, 133
Computer-aided process planning
An innovative scheme for product and process design, 85
Concave circular parallelepiped element
A concave circular parallelepiped element and its application to three-dimensional closed-die forging, 203
Concave curve die
Stress analysis of upsetting with concave curve dies, 36

Elsevier Science B.V.
PII: S0924-0136(02)00189-9

Conditioning
Pad conditioning in chemical mechanical polishing, 107
Constant turning force
Optimal predicted fuzzy controller of a constant turning force system with fixed metal removal rate, 22
Constitutive equations
Development and application of constitutive equations for the multiple-stand hot rolling of Al-alloys, 155
Contact pressure
Contact pressure between two rough surfaces of a cylindrical fit, 490
Copper–tin alloy
Extrusion of three-layer composite hexagonal clad rods, 47
Course grits
Surface characteristics in the ultrasonic ductile honing of ZrO_2 ceramics using coarse grits, 54
Creep deformation
Analysis of creep deformation behaviors of type 2205 duplex stainless steel under continuous annealing conditions, 185
Cryogenic cooling
Machining of AISI 4140 steel under cryogenic cooling—tool wear, surface roughness and dimensional deviation, 483
CuAlNi alloys
Self-accommodating martensite plate variants in shape memory CuAlNi alloys, 498
Cup
Direct redrawing of cups using an annular urethane pad, 71
Cutter position
An approach to interference-free cutter position for five-axis free-form surface side finishing milling, 191
Cutting temperature
Machining of AISI 4140 steel under cryogenic cooling—tool wear, surface roughness and dimensional deviation, 483

3D FEM simulation
A study of the influence of the friction conditions on the forging process of a blade with a tenon, 42
Deformation
Deformation of solid powder discs and strips under lubricated condition, 440
Deformation behavior
Effects of process parameters and material properties on deformation process in tube hydroforming, 285
Delamination
The laser drilling of multi-layer aerospace material systems, 100
Densification mechanism
Densification mechanisms during hot isostatic pressing of stainless steel powder compacts, 319
Diamond impregnated tools
Theoretical analysis of stone sawing with diamonds, 146
Die casting
Experimental study and theoretical analysis on die soldering in aluminum die casting, 229
Die design
Wire drawing dies with prescribed variations of strain rate, 212
Die surface state
Experimental study and theoretical analysis on die soldering in aluminum die casting, 229
Dieless
Dieless laser drawing of fine metal wires, 451
Dies
Improving the surface finish in high speed milling of stamping dies, 292
Dimensional accuracy
Machining of AISI 4140 steel under cryogenic cooling—tool wear, surface roughness and dimensional deviation, 483
Dislocation density
Development and application of constitutive equations for the multiple-stand hot rolling of Al-alloys, 155
Distribution
Particle distribution in cast metal matrix composites—Part I, 251
Double degree
A geometric model of a spherical gear with a double degree of freedom, 219
Draw-bending
Countermeasures against undesirable phenomena in the draw-bending process for extruded square tubes, 264
Drawing
Wire drawing dies with prescribed variations of strain rate, 212
Drawing limit
Dieless laser drawing of fine metal wires, 451
Drilling
Prediction of flank wear of different coated drills for JIS SUS 304 stainless steel using neural network, 354
Ductile cutting
Surface characteristics in the ultrasonic ductile honing of ZrO_2 ceramics using coarse grits, 54
Ductile fracture
Simulation of clutch-hub forging process using CAMP*form*, 120
Ductile streaks
Grinding of alumina/aluminum composites, 13
Dynamic
Deformation of solid powder discs and strips under lubricated condition, 440

Electromagnetic forming
Numerical simulation of the magnetic pressure in tube electromagnetic bulging, 225
Electroplating
Determination of Young's modulus of electroplated nickel–iron (Ni/Fe) and micro-machined Si thin films by the balance method, 329
Energy absorption
Motorcycle helmet. Part II. Materials and design issues, 422
Engineering ceramics
Surface characteristics in the ultrasonic ductile honing of ZrO_2 ceramics using coarse grits, 54
Surface integrity and modification of electro-discharge machined alumina-based ceramic composite, 75
Experiment
Effects of process parameters and material properties on deformation process in tube hydroforming, 285
Extruded aluminum alloys
Computer-aided blanking sequence design of extruded aluminum materials, 277
Extruded square tube
Countermeasures against undesirable phenomena in the draw-bending process for extruded square tubes, 264

F-coefficient
An investigation into friction in dynamic plane upsetting, 323
Feature model
Computer-aided blanking sequence design of extruded aluminum materials, 277
FEM
Countermeasures against undesirable phenomena in the draw-bending process for extruded square tubes, 264
Effects of process parameters and material properties on deformation process in tube hydroforming, 285
Reduction of the concentrated residual stress on the edges of a sandwich plate, 371

Finite element analysis
A numeric investigation of the rake face stress distribution in orthogonal machining, 114
Finite element model
Modelling of precision hard cutting using implicit finite element methods, 464
Finite element modeling
Motorcycle helmet. Part I. Biomechanics and computational issues, 406
Finite elements
Design of a cruciform biaxial tensile specimen for limit strain analysis by FEM, 67
Five-axis surface machining
An approach to interference-free cutter position for five-axis free-form surface side finishing milling, 191
Flattening distortion
Countermeasures against undesirable phenomena in the draw-bending process for extruded square tubes, 264
Flexible wire processing
Dieless laser drawing of fine metal wires, 451
Flexural strength
Surface integrity and modification of electro-discharge machined alumina-based ceramic composite, 75
FNN model
An adaptive prediction model of grain size for the forging of Ti–6Al–4V alloy based on fuzzy neural networks, 377
Foam
Motorcycle helmet. Part II. Materials and design issues, 422
Foam material
Motorcycle helmet. Part III: Manufacturing issues, 432
Forging control
The mechanism of faults originating from inclusions in the plastic deformation processes of heavy forging, 61
Forging load
An analysis of the forging processes for 6061 aluminum-alloy wheels, 270
Forming
An adaptive prediction model of grain size for the forging of Ti–6Al–4V alloy based on fuzzy neural networks, 377
Friction condition
A study of the influence of the friction conditions on the forging process of a blade with a tenon, 42

General non-axisymmetric shape
An analysis of the closed-die forging of a general non-axisymmetric shape by the upper-bound elemental technique, 197
Generic integration
An innovative scheme for product and process design, 85
Gezhouba
A note on the stresses of the ship lock of the Gezhouba project, 241
Grain size
An adaptive prediction model of grain size for the forging of Ti–6Al–4V alloy based on fuzzy neural networks, 377
Graphic user interface
Simulation of clutch-hub forging process using CAMP*form*, 120
Gravity dam
Research on the effect of bedrock upon the stress of a gravity dam bulk by the photoelastic method, 236
A note on the stresses of the ship lock of the Gezhouba project, 241
Grey-fuzzy control scheme
Optimal predicted fuzzy controller of a constant turning force system with fixed metal removal rate, 22
Grinding
Grinding of alumina/aluminum composites, 13
Group technology
An innovative scheme for product and process design, 85

Hardening model
Effect of the material-hardening mode on the springback simulation accuracy of V-free bending, 209
Head injury
Motorcycle helmet. Part I. Biomechanics and computational issues, 406
Heat transfer
Particle distribution in cast metal matrix composites—Part II, 258
Interactive computer-aided-design system for roll pass and profile design in bar rolling, 399
Heavy forging
The mechanism of faults originating from inclusions in the plastic deformation processes of heavy forging, 61
Helmet
Motorcycle helmet. Part II. Materials and design issues, 422
Helmet manufacture
Motorcycle helmet. Part III: Manufacturing issues, 432
High speed machining
Improving the surface finish in high speed milling of stamping dies, 292
High-temperature superconductor
Statistically designed experimental study of sol–gel-based film coating scheme for high-temperature superconductor and buffer materials and related processing cost evaluation, 167
Hollow cathode
Study of hollow cathode penetrating arc welding technology, 382
Hot isostatic pressing (HIP)
Densification mechanisms during hot isostatic pressing of stainless steel powder compacts, 319
Hot rolling
Development and application of constitutive equations for the multiple-stand hot rolling of Al-alloys, 155
Hydrodynamics
Deformation of solid powder discs and strips under lubricated condition, 440
Hydroforming
Effect of the initial structure on the hydro-forming of toroidal shells, 18
Effects of process parameters and material properties on deformation process in tube hydroforming, 285

Impact mechanics
Motorcycle helmet. Part I. Biomechanics and computational issues, 406
Inclusion
The mechanism of faults originating from inclusions in the plastic deformation processes of heavy forging, 61
Incorporation and mixing methods
Particle distribution in cast metal matrix composites—Part I, 251
Injection pressure
Experimental study and theoretical analysis on die soldering in aluminum die casting, 229
Injury predictors
Motorcycle helmet. Part I. Biomechanics and computational issues, 406
Interference detection
An approach to interference-free cutter position for five-axis free-form surface side finishing milling, 191
Internal fault
The mechanism of faults originating from inclusions in the plastic deformation processes of heavy forging, 61
Iron castings
Improving the surface finish in high speed milling of stamping dies, 292

Kinematics
'Pull to position', a different approach to the control of robot arms for mobile robots, 393

316L stainless steel powder
Densification mechanisms during hot isostatic pressing of stainless steel powder compacts, 319
Lanthanum aluminate
Statistically designed experimental study of sol–gel-based film coating scheme for high-temperature superconductor and buffer materials and related processing cost evaluation, 167
Laser
The laser drilling of multi-layer aerospace material systems, 100
Dieless laser drawing of fine metal wires, 451
Longitudinal vibration
Surface characteristics in the ultrasonic ductile honing of ZrO_2 ceramics using coarse grits, 54
Low temperature plasma (LTP)
Low temperature plasma-treated nylon fabrics, 5
Lubrication
Deformation of solid powder discs and strips under lubricated condition, 440

Machining
A study on different tooling systems during machining of Al/SiC-MMC, 476
Magnetic field property
Numerical simulation of the magnetic pressure in tube electromagnetic bulging, 225
Magnetic pressure
Numerical simulation of the magnetic pressure in tube electromagnetic bulging, 225
Martensite plate variants
Self-accommodating martensite plate variants in shape memory CuAlNi alloys, 498
Material modeling
Motorcycle helmet. Part I. Biomechanics and computational issues, 406
Material properties
Effects of process parameters and material properties on deformation process in tube hydroforming, 285
Material selection
Motorcycle helmet. Part II. Materials and design issues, 422
Materials
On the effects of geometric parameters on springback in sheets of five materials subjected to air vee bending, 459
Mechanical engineering
Contact pressure between two rough surfaces of a cylindrical fit, 490
Metal flowing law
A study of the influence of the friction conditions on the forging process of a blade with a tenon, 42
Metal matrix composites
Grinding of alumina/aluminum composites, 13
Particle distribution in cast metal matrix composites—Part I, 251
Metal removal rate
Optimal predicted fuzzy controller of a constant turning force system with fixed metal removal rate, 22
Metal-arc welding
Prediction of weld bead geometry and penetration in shielded metal-arc welding using artificial neural networks, 303
Microcracking
The laser drilling of multi-layer aerospace material systems, 100
Micron size wire
Dieless laser drawing of fine metal wires, 451
Microstructure
Microstructure and phase decomposition of quasi-crystal $Zn_{60}Mg_{30}Y_{10}$ alloy, 245
Progress in the micro-modeling of the casting solidification process, 361
Milling
Comparison of the tool life of tungsten carbides coated by multilayer TiCN and TiAlCN for end mills using the Taguchi method, 1
Improving the surface finish in high speed milling of stamping dies, 292
Model based control
'Pull to position', a different approach to the control of robot arms for mobile robots, 393
Modeling
Progress in the micro-modeling of the casting solidification process, 361
Monitoring
On-line tool wear monitoring during ultrasonic machining using tool resonance frequency, 80
Motorcycle
Motorcycle helmet. Part II. Materials and design issues, 422
Motorcycle helmet
Motorcycle helmet. Part I. Biomechanics and computational issues, 406
Multi-layer
Comparison of the tool life of tungsten carbides coated by multilayer TiCN and TiAlCN for end mills using the Taguchi method, 1

Neutral file
An innovative scheme for product and process design, 85
Newton–Raphson method
Single parameter accelerated modified Newton–Raphson methods for rigid/plastic FE analysis, 385
Ni wire
Dieless laser drawing of fine metal wires, 451
Ni/Fe thin films
Determination of Young's modulus of electroplated nickel–iron (Ni/Fe) and micro-machined Si thin films by the balance method, 329
Niobium–tin alloy
Extrusion of three-layer composite hexagonal clad rods, 47
Non-polymerizing gas
Low temperature plasma-treated nylon fabrics, 5
Normal stress
A numeric investigation of the rake face stress distribution in orthogonal machining, 114
Numerical simulation
Numerical simulation of the magnetic pressure in tube electromagnetic bulging, 225

Object-based knowledge systems
An innovative scheme for product and process design, 85
Omega scans
Statistically designed experimental study of sol–gel-based film coating scheme for high-temperature superconductor and buffer materials and related processing cost evaluation, 167
Optimal design
Design of a cruciform biaxial tensile specimen for limit strain analysis by FEM, 67
Orthogonal cutting model
Modelling of precision hard cutting using implicit finite element methods, 464
Orthogonal machining
A numeric investigation of the rake face stress distribution in orthogonal machining, 114

Penetrating arc
Study of hollow cathode penetrating arc welding technology, 382
Percussion drilling
The laser drilling of multi-layer aerospace material systems, 100
Performance monitoring
Thermal performance of thermoplastic natural rubber solar collector, 179
Phase decomposition
Microstructure and phase decomposition of quasi-crystal $Zn_{60}Mg_{30}Y_{10}$ alloy, 245
Phi scans
Statistically designed experimental study of sol–gel-based film coating scheme for high-temperature superconductor and buffer materials and related processing cost evaluation, 167
Photoelastic
Research on the effect of bedrock upon the stress of a gravity dam bulk by the photoelastic method, 236
Photoelastic method
A note on the stresses of the ship lock of the Gezhouba project, 241
Plane-strain upsetting
An investigation into friction in dynamic plane upsetting, 323
Polyamide
Low temperature plasma-treated nylon fabrics, 5
Post-processor
Simulation of clutch-hub forging process using CAMP*form*, 120
Precipitation
Influence of Al_2O_3 particulate on the aging response of A356 Al-based composites, 313
Precision hard turning
Modelling of precision hard cutting using implicit finite element methods, 464
Pre-processor
Simulation of clutch-hub forging process using CAMP*form*, 120
Process parameters
Effects of process parameters and material properties on deformation process in tube hydroforming, 285
Process planning
Identifying tolerance chains with a surface-chain model in tolerance charting, 93
Computer-aided blanking sequence design of extruded aluminum materials, 277
Pulse energy
The laser drilling of multi-layer aerospace material systems, 100
Pulse shape
The laser drilling of multi-layer aerospace material systems, 100
Pulsed GTA welding
The effect of pulsed GTA welding on the residual stress of a stainless steel weldment, 346
Punch speed
An analysis of the forging processes for 6061 aluminum-alloy wheels, 270

Quasi-crystal $Zn_{60}Mg_{30}Y_{10}$ alloy
Microstructure and phase decomposition of quasi-crystal $Zn_{60}Mg_{30}Y_{10}$ alloy, 245
Quenching process
Reduction of the concentrated residual stress on the edges of a sandwich plate, 371

Radial basis function network
Prediction of flank wear of different coated drills for JIS SUS 304 stainless steel using neural network, 354
Rake face
A numeric investigation of the rake face stress distribution in orthogonal machining, 114
Recovery
Development and application of constitutive equations for the multiple-stand hot rolling of Al-alloys, 155
Recrystallisation
Development and application of constitutive equations for the multiple-stand hot rolling of Al-alloys, 155
Redrawing
Direct redrawing of cups using an annular urethane pad, 71
Reinforcement particles
Particle distribution in cast metal matrix composites—Part I, 251
Remelt layer
The laser drilling of multi-layer aerospace material systems, 100
Remeshing
Simulation of clutch-hub forging process using CAMP*form*, 120
A three-dimensional finite element analysis of the three-roll planetary mill, 336
Residual stress
The effect of pulsed GTA welding on the residual stress of a stainless steel weldment, 346
Reduction of the concentrated residual stress on the edges of a sandwich plate, 371
Resonance
On-line tool wear monitoring during ultrasonic machining using tool resonance frequency, 80
Rigid–plastic finite element equations
Single parameter accelerated modified Newton–Raphson methods for rigid/plastic FE analysis, 385
Rim thickness
An analysis of the forging processes for 6061 aluminum-alloy wheels, 270
Robotics
'Pull to position', a different approach to the control of robot arms for mobile robots, 393
Roll pass design
Particle distribution in cast metal matrix composites—Part II, 258
Interactive computer-aided-design system for roll pass and profile design in bar rolling, 399
Roll profile design
Particle distribution in cast metal matrix composites—Part II, 258
Interactive computer-aided-design system for roll pass and profile design in bar rolling, 399
Roll speed
Particle distribution in cast metal matrix composites—Part II, 258
Interactive computer-aided-design system for roll pass and profile design in bar rolling, 399

Secondary processing
Particle distribution in cast metal matrix composites—Part I, 251
Self-accommodation
Self-accommodating martensite plate variants in shape memory CuAlNi alloys, 498
Shape memory effect
Self-accommodating martensite plate variants in shape memory CuAlNi alloys, 498
Shape-memory alloys
Anisotropy of the phase-transformation plasticity in textured CuZnAl shape-memory sheets, 31
Shear stress
A numeric investigation of the rake face stress distribution in orthogonal machining, 114
Ship lock
A note on the stresses of the ship lock of the Gezhouba project, 241
Single parameter
Single parameter accelerated modified Newton–Raphson methods for rigid/plastic FE analysis, 385

Sintered preforms
Deformation of solid powder discs and strips under lubricated condition, 440
Slip-line theory
An investigation into friction in dynamic plane upsetting, 323
Solar collector performance parameters
Thermal performance of thermoplastic natural rubber solar collector, 179
Soldering
Experimental study and theoretical analysis on die soldering in aluminum die casting, 229
Sol–gel
Statistically designed experimental study of sol–gel-based film coating scheme for high-temperature superconductor and buffer materials and related processing cost evaluation, 167
Solidification
Particle distribution in cast metal matrix composites—Part I, 251
Spherical gear
A geometric model of a spherical gear with a double degree of freedom, 219
Springback
On the effects of geometric parameters on springback in sheets of five materials subjected to air vee bending, 459
Springback simulation
Effect of the material-hardening mode on the springback simulation accuracy of V-free bending, 209
Stainless steel
Prediction of flank wear of different coated drills for JIS SUS 304 stainless steel using neural network, 354
Statistical analysis
On the effects of geometric parameters on springback in sheets of five materials subjected to air vee bending, 459
Stone sawing
Theoretical analysis of stone sawing with diamonds, 146
Strain hardening
Development and application of constitutive equations for the multiple-stand hot rolling of Al-alloys, 155
Strain rate
Wire drawing dies with prescribed variations of strain rate, 212
Strain rate sensitivity value
Analysis of creep deformation behaviors of type 2205 duplex stainless steel under continuous annealing conditions, 185
Strain-rate effect
An analysis of the forging processes for 6061 aluminum-alloy wheels, 270
Stress
Research on the effect of bedrock upon the stress of a gravity dam bulk by the photoelastic method, 236
Stress distribution
Stress analysis of upsetting with concave curve dies, 36
Structure
Effect of the initial structure on the hydro-forming of toroidal shells, 18
Superplasticity
Analysis of creep deformation behaviors of type 2205 duplex stainless steel under continuous annealing conditions, 185
Surface analysis
Pad conditioning in chemical mechanical polishing, 107
Surface finish
A study on different tooling systems during machining of Al/SiC-MMC, 476
Machining of AISI 4140 steel under cryogenic cooling—tool wear, surface roughness and dimensional deviation, 483
Surface integrity
Surface integrity and modification of electro-discharge machined alumina-based ceramic composite, 75
Surface modification
Surface integrity and modification of electro-discharge machined alumina-based ceramic composite, 75
Surface roughness
Roughness parameters, 133
Surface texture
Contact pressure between two rough surfaces of a cylindrical fit, 490
Surface topography
Roughness parameters, 133
Surface-chain model
Identifying tolerance chains with a surface-chain model in tolerance charting, 93

Taguchi genetic method
Optimal predicted fuzzy controller of a constant turning force system with fixed metal removal rate, 22
Taguchi L12 experimental design
Statistically designed experimental study of sol–gel-based film coating scheme for high-temperature superconductor and buffer materials and related processing cost evaluation, 167
Taguchi method
Comparison of the tool life of tungsten carbides coated by multi-layer TiCN and TiAlCN for end mills using the Taguchi method, 1
Prediction of flank wear of different coated drills for JIS SUS 304 stainless steel using neural network, 354
Temperature
Experimental study and theoretical analysis on die soldering in aluminum die casting, 229
Tensile residual stress zone
The effect of pulsed GTA welding on the residual stress of a stainless steel weldment, 346
Texture
Anisotropy of the phase-transformation plasticity in textured CuZnAl shape-memory sheets, 31
Thermoplastic natural rubber (TPNR)
Thermal performance of thermoplastic natural rubber solar collector, 179
Thermosyphon solar hot water systems
Thermal performance of thermoplastic natural rubber solar collector, 179
Thermo-viscoplastic finite element analysis
An analysis of the forging processes for 6061 aluminum-alloy wheels, 270
Thermo-viscoplastic finite element method
Simulation of clutch-hub forging process using CAMP*form*, 120
Three-roll planetary rolling process
A three-dimensional finite element analysis of the three-roll planetary mill, 336
Tight fit
Contact pressure between two rough surfaces of a cylindrical fit, 490
Titanium alloy
An adaptive prediction model of grain size for the forging of Ti–6Al–4V alloy based on fuzzy neural networks, 377
Study of hollow cathode penetrating arc welding technology, 382
Tolerance charting
Identifying tolerance chains with a surface-chain model in tolerance charting, 93
Tolerance stack-up
Identifying tolerance chains with a surface-chain model in tolerance charting, 93
Tool design
On the effects of geometric parameters on springback in sheets of five materials subjected to air vee bending, 459
Tool wear
On-line tool wear monitoring during ultrasonic machining using tool resonance frequency, 80

Machining of AISI 4140 steel under cryogenic cooling—tool wear, surface roughness and dimensional deviation, 483
Tooling system
A study on different tooling systems during machining of Al/SiC-MMC, 476
Toroidal shell
Effect of the initial structure on the hydro-forming of toroidal shells, 18
Turning
Machining of AISI 4140 steel under cryogenic cooling—tool wear, surface roughness and dimensional deviation, 483

Ultrasonic honing
Surface characteristics in the ultrasonic ductile honing of ZrO_2 ceramics using coarse grits, 54
Ultrasonic machining
On-line tool wear monitoring during ultrasonic machining using tool resonance frequency, 80
Upper-bound elemental technique
An analysis of the closed-die forging of a general non-axisymmetric shape by the upper-bound elemental technique, 197
A concave circular parallelepiped element and its application to three-dimensional closed-die forging, 203
Urethane
Direct redrawing of cups using an annular urethane pad, 71
UV-LIGA technology
Determination of Young's modulus of electroplated nickel–iron (Ni/Fe) and micro-machined Si thin films by the balance method, 329

Wall thickness
Effects of process parameters and material properties on deformation process in tube hydroforming, 285
Wear
A study on different tooling systems during machining of Al/SiC-MMC, 476
Welding
Study of hollow cathode penetrating arc welding technology, 382
Welding parameter
The effect of pulsed GTA welding on the residual stress of a stainless steel weldment, 346
Welding technology margin
Study of hollow cathode penetrating arc welding technology, 382
Wire drawing
Dieless laser drawing of fine metal wires, 451
Wrinkle
Effect of the initial structure on the hydro-forming of toroidal shells, 18
Wrinkling
Countermeasures against undesirable phenomena in the draw-bending process for extruded square tubes, 264

Young's modulus
Effect of the material-hardening mode on the springback simulation accuracy of V-free bending, 209
Determination of Young's modulus of electroplated nickel–iron (Ni/Fe) and micro-machined Si thin films by the balance method, 329